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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/720,299	11/24/2003	Lawrence Howell Sawyer	17398	4119
23556	7590	10/05/2005		
KIMBERLY-CLARK WORLDWIDE, INC. 401 NORTH LAKE STREET NEENAH, WI 54956			EXAMINER BOYD, JENNIFER A	
			ART UNIT	PAPER NUMBER
			1771	
DATE MAILED: 10/05/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/720,299

Applicant(s)

SAWYER ET AL.

Examiner

Jennifer A. Boyd

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/23/04, 5/31/05</u> | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1 – 15 and 17 - 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Independent claims 1, 11, 15 and 17 - 19 recite physical properties of an integrally formed absorbent material (i.e. greater than 25% of the total liquid in the web above 5 cm in height after second insult with a run-off of less than 10 g, permeability difference between zones of at least  $40 \text{ um}^2$ , target zone permeability of least about  $50 \text{ um}^2$ , two adjacent zones vary in fiber type such that they vary in their contact angle, one or more of the zones contains a material designed to decrease the ionic strength, one or more of the zones contains a material designed to increase or decrease the viscosity or viscoelasticity of a body exudate). *Ex parte Slob*, 157 USPQ 172, states the following with regard to an article claimed by defining property values:

Claims merely setting forth physical characteristics desired in article, and not setting forth specific compositions which would meet such characteristics, are invalid as vague, indefinite and functional since they cover any conceivable combination of ingredients, either presently existing or which might be discovered in future and which would impart desired characteristics; thus expression “a liquefiable substance having a liquefaction temperature from about  $40^\circ\text{C}$  to about  $300^\circ\text{C}$  and being compatible with the ingredients in the powdered detergent composition” is too broad and indefinite since it purports to cover everything which will perform the desired functions regardless of its composition, and in effect, recites compounds by what it is desired that they do rather than what they are; expression also is too broad since it appears to read upon the materials that could not possibly be used to accomplish purposes intended.

Furthermore, it is necessary that the product be described with sufficient particularity that it can be identified so that one can determine what will and will not infringe. Thus, claims 1 – 15 and 17 - 21 are indefinite for reciting only the desired physical properties of the integrally formed absorbent material composed of at least two zones in-plane and at least two zones out-of-plane, rather than setting forth structural and/or chemical limitations of the integrally formed absorbent web or material.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 16 is rejected under 35 U.S.C. 102(b) as being anticipated by Guidotti et al. (US 5,961,506).

Guidotti is directed to an absorbent body in an absorbent product (Title).

As to claim 16, Guidotti teaches an embodiment as shown in Figure 9 meeting Applicant's requirements of having at least two in plane zones and at least two out of plane zones in the z-direction. In Figure 9, the fiber material in the well 13 can consist of cellulose fibers of mechanical pulp, thermo-mechanical pulp, or chemo-thermo-mechanical pulp. Guidotti notes that these fibers are relatively coarse and have large pore volume, high wet resilience and low liquid dispersibility (column 3, lines 40 – 50). Guidotti notes that cover layer 11 and well 13 can be integrated with each other and can consist of the same material (column 3, lines 50 – 60).

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Guidotti teaches in the storage layer 12 consists of fluff pulp or other fiber material with small pore volume and high liquid dispersibility. Fluff pulps made chemically, which consist of fine fibers of essentially pure cellulose, have in general good liquid dispersibility (column 4, lines 25 – 40). It should be noted that the cover layer 11 and well 13 consist of relatively coarse fibers while the storage layer 12 consists of relatively fine fibers, which would result in Applicant's coarseness ratio of greater than 1.

5. Claim 17 is rejected under 35 U.S.C. 102(b) as being anticipated by Erspamer (WO 01/35886).

Erspamer is directed to absorbent structures used in a wide range of disposable articles, including baby diapers, adult incontinence products, sanitary napkins and the like (page 2, lines 1 - 5).

Erspamer teaches a unitary absorbent core comprising one or more Strata of absorbent material, in which one or more of the properties of the basis weight, functional particle content, or density of at least one of the strata is profiled in the y-direction (page 7, lines 15 - 19).

Erspamer defines stratum as a layer, which is preferably airlaid, comprising deposited fibers, powders including additives and functional particles, such as SAP and binders (page 16, lines 6 - 13). The Examiner equates the one or more strata to the Applicant's "at least two zones out of the plane in the z-direction". Erspamer notes that, in certain embodiments the structure may be profiled in both the y- and z-directions (page 19, lines 1 - 3). Therefore, in those embodiments, both the y- and z-directions can vary in one or more of the properties of the basis weight, functional particle content, or density. Erspamer teaches that striped stratum can be used in

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particular embodiments as seen in Figures 3 and 4h (page 19, lines 20 - 25 and page 23, lines 3 - 5). The Examiner equates the profiling in the y-direction to Applicant's "at least two zones in the plane". Erspamer defines striped stratum as a special case of a profiled stratum in which one or more of the absorbent material basis weight, density or content of functional particles in the stratum drop to very low levels or zero for a finite length in the y-direction. The finite length can be parceled into discontinuous segments and can be distributed in a uniform pattern in the y-direction (page 16, lines 17 - 22). Erspamer teaches the use of various types of fibers in each of the zones which would inherently have their own contact angles.

***Claim Rejections - 35 USC § 102/103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1 - 15 and 20 - 21 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Erspamer (WO 01/35886).

Erspamer is directed to absorbent structures used in a wide range of disposable articles, including baby diapers, adult incontinence products, sanitary napkins and the like (page 2, lines 1 - 5).

As to claims 1 and 11, Erspamer teaches a unitary absorbent core comprising one or more strata of absorbent material, in which one or more of the properties of the basis weight, functional particle content, or density of at least one of the strata is profiled in the y-direction

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(page 7, lines 15 - 19). Erspamer defines stratum as a layer, which is preferably airlaid, comprising deposited fibers, powders including additives and functional particles, such as SAP and binders (page 16, lines 6 - 13). The Examiner equates the one or more strata to the Applicant's "at least two zones out of the plane in the z-direction". Erspamer notes that, in certain embodiments the structure may be profiled in both the y- and z-directions (page 19, lines 1 - 3). Therefore, in those embodiments, both the y- and z-directions can vary in one or more of the properties of the basis weight, functional particle content, or density. Erspamer teaches that striped stratum can be used in particular embodiments as seen in Figures 3 and 4h (page 19, lines 20 - 25 and page 23, lines 3 - 5). The Examiner equates the profiling in the y-direction to Applicant's "at least two zones in the plane". Erspamer defines striped stratum as a special case of a profiled stratum in which one or more of the absorbent material basis weight, density or content of functional particles in the stratum drop to very low levels or zero for a finite length in the y-direction. The finite length can be parceled into discontinuous segments and can be distributed in a uniform pattern in the y-direction (page 16, lines 17 - 22). It should be noted that the terms "target" and "non-target" are relative, depending on the positioning of the absorbent composite. The Examiner submits that Erspamer teaches Applicant's configuration.

As to claim 2, Erspamer shows in Figure 4h an embodiment with three zones in the z-direction and 5 zones in the y-direction.

As to claim 20, Erspamer teaches that at least one of the stratum can include functional particles, such as SAP and binders (page 16, lines 6 - 13).

As to claim 21, Erspamer is directed to absorbent structures used in a wide range of

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disposable articles, including baby diapers, adult incontinence products, sanitary napkins and the like (page 2, lines 1 - 5) .

As to claims 1 – 15, although Erspamer does not explicitly teach the claimed greater than 25% of the total liquid in the web or material above 5 cm in height after second insult, with a run-off of less than 10 g in accordance with the MIST test as required by claim 1, greater than 30% of the total liquid in the web or material above 5 cm in height after second insult, with a run-off of less than 6 g in accordance with the MIST test as required by claim 3, greater than 32% of the total liquid in the web or material above 5 cm in height after second insult, with a run-off of less than 4 g in accordance with the MIST test as required by claim 4, greater than 25% of the total liquid in the web or material above 5 cm in height after second insult, with a run-off of less than 30 g in accordance with the MIST test as required by claim 5, greater than 30% of the total liquid in the web or material above 5 cm in height after second insult, with a run-off of less than 20 g in accordance with the MIST test as required by claim 6, greater than 35% of the total liquid in the web or material above 5 cm in height after second insult, with a run-off of less than 15 g in accordance with the MIST test as required by claim 7, greater than 25% of the total liquid in the web or material above 5 cm in height after second insult, with a run-off of less than 45 g in accordance with the MIST test as required by claim 8, greater than 35% of the total liquid in the web or material above 5 cm in height after second insult, with a run-off of less than 35 g in accordance with the MIST test as required by claim 9, greater than 40% of the total liquid in the web or material above 5 cm in height after second insult, with a run-off of less than 25 g in accordance with the MIST test as required by claim 10, two adjacent



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out of plane zones having a z-directional permeability difference of at least  $40 \text{ um}^2$  as required by claim 11, in plane zones demonstrate a permeability difference of greater than about  $40 \text{ um}^2$  and out of plane zones having a permeability difference of greater than  $54 \text{ um}^2$  as required by claim 12, the out of plane zone demonstrates a higher permeability than the plane closest to the garment facing surface as required by claim 13, the target-in-plane zone demonstrates a higher permeability than a non-target in plane zone as required by claim 14, a target zone permeability of at least about  $50 \text{ um}^2$  as required by claim 15, it is reasonable to presume that the above properties are inherent. Support for said presumption is found in the use of like materials (i.e. an air-laid multi-zoned material in the y-direction and z-direction comprising deposited fibers, powders including additives and functional particles, such as SAP and binders, wherein in the zoned directions one or more of the properties of the basis weight, functional particle content, or density may vary). which would result in the claimed properties. The burden is upon the Applicant to prove otherwise. *In re Fitzgerald* 205 USPQ 594. In addition, the presently claimed properties would obviously have been present once the Erspamer product is provided. Note *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977).

### ***Claim Rejections - 35 USC § 103***

8. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Guidotti et al. (US 5,961,506) in view of Berg et al. (EP 0202127 A2).

Guidotti teaches the claimed invention above but fails to teach that one or more zones contains a material designed to increase the ionic strength of a body exudates.

Berg et al. is directed to an absorbent article (Title). Berg teaches absorbent articles containing both pH control agents and substantially water-insoluble, highly neutralized hydrogel material as a fluid-absorbing polymer are disclosed. By placing pH control agents and hydrogel in distinct zones within the article, absorbent products such as diapers can be realized which are highly effective for absorbing discharged body fluids and prevent or reduce diaper rash (Abstract). Berg et al. teaches that one type of preferred pH control agent is an ion exchange material (page 13, lines 20 - 35).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the ion exchange agent of Berg into the absorbent material of Guidotti motivated by the desire to reduce diaper rash.

9. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Erspamer (WO 01/35886) in view of Berg et al. (EP 0202127 A2).

Erspamer teaches the claimed invention above but fails to teach that one or more zones contains a material designed to increase the ionic strength of a body exudates.

Berg et al. is directed to an absorbent article (Title). Berg teaches absorbent articles containing both pH control agents and substantially water-insoluble, highly neutralized hydrogel material as a fluid-absorbing polymer are disclosed. By placing pH control agents and hydrogel in distinct zones within the article, absorbent products such as diapers can be realized which are highly effective for absorbing discharged body fluids and prevent or reduce diaper rash (Abstract). Berg et al. teaches that one type of preferred pH control agent is an ion exchange material (page 13, lines 20 - 35).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the ion exchange agent of Berg into the absorbent material of Erspamer motivated by the desire to reduce diaper rash.

10. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Guidotti et al. (US 5,961,506) in view of Yahiaoui et al. (US 6,060,636).

Guidotti teaches the claimed invention above but fails to teach that one or more zones contains a material designed to substantially increase or decrease the viscosity or viscoelasticity of body exudates.

Yahiaoui is directed to an improved absorbent structure including a viscoelastant treatment. The treated web, when contacted by a viscoelastic fluid, alters the viscoelastic properties of the fluid and enhances the wicking and distribution throughout the absorbent structure (Abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a viscoelastant treatment as suggested by Yahiaoui in the absorbent material of Guidotti motivated by the desire to enhance the wicking and distribution of a fluid throughout an absorbent structure.

11. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Erspamer (WO 01/35886) in view of Yahiaoui et al. (US 6,060,636).

Erspamer teaches the claimed invention above but fails to teach that one or more zones

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contains a material designed to substantially increase or decrease the viscosity or viscoelasticity of body exudates.

Yahiaouti is directed to an improved absorbent structure including a viscoelastant treatment. The treated web, when contacted by a viscoelastic fluid, alters the viscoelastic properties of the fluid and enhances the wicking and distribution throughout the absorbent structure (Abstract).


It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a viscoelastant treatment as suggested by Yahiaouti in the absorbent material of Erspamer motivated by the desire to enhance the wicking and distribution of a fluid throughout an absorbent structure.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A. Boyd whose telephone number is 571-272-1473. The examiner can normally be reached on Monday thru Friday (8:30am - 6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Jennifer Boyd  
September 27, 2005

  
**Ula C. Ruddock**  
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